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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,005	11/12/2003	Thaddeus M. Jones	ETI0070.US	6552

7590

10/20/2004

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EXAMINER

FUQUA, SHAWNTINA T

ART UNIT PAPER NUMBER

3742

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,005

Applicant(s)

JONES, THADDEUS M.

Examiner

Shawntina T. Fuqua

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/12/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sopory (US6703593) in view of Deo et al (US5935470).

Sopory discloses a cut to length heating system/tri-axial heating cable/method of delivering heat (column 3, lines 55-60) comprising a heating cable (100) including a first conductor (102), and a second conductor (108), an average power limiting device (104, 106) wherein the average power limiting device supplies a predetermined current to one of the first and second conductor (column 7, line 58-column 8, line 21), heating cable is surrounded by concrete or asphalt or installed proximate to a gutter or roof (column 8, lines 57-65), insulation (110) surrounding conductors, a cable length setting that provides information analogous to a length of heater cable to power limiting device (column 6, line 54-column 7, line 5), a tri-axial heating cable comprising a center conductor (102), an insulating layer (104), a resistive conductor layer (108), an electrical insulating layer (110, column 7, lines 24-35), a conductive layer (column 7, lines 20-23), a conductor layer of mesh (column 7, line 24), and a method of controlling energy comprising the steps of providing a heating cable, selecting a predetermined density, determining a resistance value of cable, and delivering electrical current to heating cable dependent on resistance value and predetermined heat density (column 7, line 58-column 8, line

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21). Sopory does not disclose two conductors electrically connected together wherein the resistivity of one conductor is higher than the other conductor. Deo et al discloses two conductors electrically connected together wherein the resistivity of one conductor is higher than the other conductor (column 3, line 63-column 4, line 13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included connecting the conductors wherein the resistivity of one conductor is higher than the other conductor as taught by Deo et al in the heating system of Sopory because, a heating system with two conductors connected wherein the resistivity of one conductor is higher than the other conductor results in a heating element which undergoes a rapid increase in temperature from an ambient to a higher temperature.

Sopory in view of Deo et al discloses all of the recited subject matter except a temperature sensor. Temperature sensors are conventional and well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a temperature sensor as a means to measure and regulate temperature more efficiently.

Conclusion

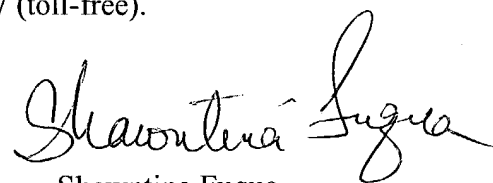
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawntina T. Fuqua whose telephone number is (703) 305-2581. The examiner can normally be reached on Monday-Friday 8-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (703) 305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

stf
October 15, 2004

A handwritten signature in cursive script, reading "Shawntina Fuqua".

Shawntina Fuqua
Patent Examiner
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